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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/683,592	10/10/2003	Roger Proksch	14083-002002	1027
20985	7590	03/30/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			PATIDAR, JAY M	
			ART UNIT	PAPER NUMBER
			2862	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/683,592

Applicant(s)

PROKSCH ET AL.

Examiner

Jay M. Patidar

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-60 is/are pending in the application.
- 4a) Of the above claim(s) 23-49 and 51-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-13, 19-22 and 50 is/are rejected.
- 7) ☒ Claim(s) 14-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/10/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. This communication is in response to applicants' response filed on February 10, 2005.
2. Claims 23-49,51-60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 10, 2005.
3. Figure 18 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,

- coil form made from non-ferromagnetic adhesive;
- the shell as set forth in claim 10;
- the shell that produces a magnetic field (cl. 11);
- atomic force microscope connected to a position sensor (cl. 22);

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. Claims 6,11,19 are objected to because of the following informalities:

In claim 6, it is unclear as to how a coil form is made from adhesive;

In claim 11, it is unclear as to how a shell produces a magnetic field;

In claim 19, it is not clear as to what is meant by object of interest.

Appropriate correction is required.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-13,19-22,50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neff (2,452,862) in view of Ellis (3,891,918) & common knowledge in the art.

As to claims 4-6,19,50, Neff discloses a position apparatus including a first and second non-ferromagnetic coil forms (6,2) with a common axis, each wound

with at least one winding or coil elements (3,4,5); a moving coil part 5; a stationary coil part 3 or 4; the winding on the movable form magnetically coupled to the winding on the stationary form and a circuit generating a signal responsive to relative displacement between the coil forms. Neff further discloses a moving coil part 5 constrained to move in a linear direction (fig. 2); the second coil element having two electrical connections, which produce an output signal indicative of a moving relationship between said moving coil part and said stationary coil part (fig. 2, voltmeter); the stationary coil part is sufficiently closed to the moving coil part such that magnetic flux from the moving coil part is induced into the stationary coil part. Neff does not explicitly disclose that the forms are solid non-ferromagnetic. It is common in the magnetic field art as disclosed by Ellis to have a coil form made from solid or plastic/resin non-ferromagnetic material. Ellis discloses that a coil form is made from non-ferromagnetic material like ceramic. Other materials e.g. plastic, resin, papers, glass etc. are also known in the art. One ordinary skill in the art would have found it obvious to use solid non-ferromagnetic coil forms since they are very well known in the art for their use.

As to claim 7, coil 5, which is a driving coil, is connected to the excitation electronics (fig. 2).

As to claims 8-11, Voltmeter is connected to the stationary coil part to receive voltages from the stationary coil induced by movement of the moving coil part. The use of amplifier and shell is known for amplifying output signals and as a housing respectively.

As to claim 12, the waveform in Neff is sine wave (fig. 2).

As to claim 13, Neff discloses a sinusoidal wave generator (oscillator) instead of a square wave generator. It would be obvious to use a square wave generator since it is known in the art for its use as well defined amplitude and frequency.

As to claims 20-22, the provision of connecting the moving coil part in Neff involves only routine skill in the art (note page 15 of the specification).

7. Claims 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

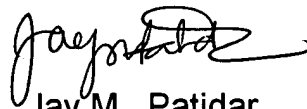
8. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show details of the processing circuitry as claimed in claims 14 and 17.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 703-308-6723. The examiner can normally be reached on M-Thur 7:00-5:30.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0956.



Jay M. Patidar  
Primary Examiner  
Tech Center 2862  
March 23, 2005